CUSTOMER NO. 46850 *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re: Attorney Docket No. Alfakih 1-1-1-6-24

In re application of: Abdo Y. Alfakih et al.

Serial No.:	10/673,056	Group Art Unit:	2619
Filed:	09/26/03	Examiner:	Salman Ahmed
Matter No.:	990.0435	Phone No.:	TBD

For: Restoration Time in Mesh Networks

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal. The review is requested for the reason(s) stated in the following Remarks/Arguments section.

REMARKS/ARGUMENTS

Claims 1, 3-15, and 17-30 are pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of these remarks.

Claim Rejections and Allowable Subject Matter

In paragraph 4 of the final office action dated 07/21/08, the Examiner rejected claims 1, 7, 10-15, 21, and 24-28 under 35 U.S.C. 103(a) as being unpatentable over Shinomiya in view of Arslan. In paragraph 8, the Examiner objected to claims 3-6, 8-9, 17-20, and 22-23 as being dependent upon a rejected base claim, but indicated that those claims would be allowable if rewritten in independent form. In paragraph 9, the Examiner allowed claims 29 and 30. For the following reasons, the Applicant submits that all of the pending claims are allowable.

According to claim 1, one or more demands for service are received in a mesh network comprising a plurality of nodes interconnected by a plurality of links. A threshold is specified corresponding to a maximum number of failure-related cross-connections at a node in the network. Each of the one or more demands is mapped onto a primary path and a restoration path in the network to generate a path plan for the one or more demands in the network. Reduction of a portion of restoration time associated with failure-related cross-connections in the network is taken into account during the mapping. The mapping generates the path plan based on the

specified threshold such that, for all nodes in the mesh network, the number of failure-related cross-connections at each node is no more than the specified threshold.

In rejecting claim 1, the Examiner admitted, in paragraph 4, that Shinomiya does not disclose:

"o specifying a threshold corresponding to a maximum number of failure-related cross-connections at a node in the network; and

o reduction of a portion of restoration time associated with failure-related cross-connections in the network is taken into account during the mapping,

o based on the specified threshold such that, for all nodes in the mesh network, the number of failure-related cross-connections at each node is no more than the specified threshold."

Instead, the Examiner cited Arslan as teaching the features of claim 1 that are missing from Shinomiya. In particular, the Examiner stated that Arslan:

> "teaches the use of processing decreases the restoration time of the entire circuit **(see Arslan col. 14 lines 45-60)**, and specifies the maximum number of cross-connections **(see Arslan col. 5 lines 13-27)** where this circuit element is of restoration processor **(see Arslan col. 4 lines 46-65)**, and DACS III-2000 **(see Arslan figure 1 ref 107 is connected to restoration processor)**, and in network **(figure 1 ref 100 network)** each DACS digital cross-connect system **(see Arslan figure 1 107 and ref 109 as a node in the network which is connected to restoration processor and in figure 2 shows a circuit state element in restoration processor)**."

As best as can be understood, it appears that the Examiner is arguing that Arslan's "circuit" is a "restoration processor" or maybe the combination of a "restoration processor" and a "DACSIII-2000." Significantly, however, when Arslan uses the term "circuit," Arslan is not referring to a "circuit element." Rather, in Arslan, the term "circuit" is most analogous to the term "path" in the present application. In column 3, lines 34-36, Arslan explicitly defines the term "circuit" as follows:

> "For clarity, a circuit in network **100** is defined as an end-to-end bi-directional connection to interconnect elements outside of network **100**."

Thus, when Arslan states, in column 5, lines 20-23, that "The number of segments limit specifies the maximum number of cross-connections that are permitted to be employed when provisioning or restoring the circuit," Arslan is teaching that there is a maximum number of cross-connections in a path in network **100**. Arslan is not teaching or even suggesting that there is a maximum number of cross-connections in a node in network **100**. These are two very different things.

In general, a path in a network is made up of two or more nodes interconnected by one or more links, where each intermediate node provides a cross-connection from an incoming link in the path to an outgoing link in the path. Each node in a network is capable of being part of one or more different paths at the same time.

Arslan teaches that there is a maximum number of cross-connections in a path (i.e., Arslan's "circuit") in a network. Claim 1 refers to a maximum number of cross-connections at a node in a network. Limiting the number of cross-connections in a path is simply not the same thing as limiting the number of cross-connections in a node.

To the extent that the teachings of Arslan are different from the claimed invention, and to the extent that the Examiner at least suggested that they are not different, the Applicant submits that the Examiner mischaracterized the teachings in Arslan or mischaracterized the claimed invention or both in rejecting claim 1. As such, the Applicant submits that the rejection of claim 1 is improper and should be withdrawn.

On 8/12/08, the Applicant's below-named patent attorney Steve Mendelsohn participated in a telephonic interview with the Examiner. During the interview, Mr. Mendelsohn explained that, as discussed above, the term "circuit" in Arslan is most analogous to the term "path" in the present application, not the term "node." During the interview, the Examiner indicated that he understood and appreciated the Applicant's argument.

On 8/20/08, the Applicant filed a Response Under 37 CRF 1.116 to the final office action. The Response contained the same arguments presented above. Notwithstanding the indication during the interview that the Examiner understood and appreciated the Applicant's arguments, on 9/16/08, the Examiner mailed an Advisory Action stating that the Applicant's arguments were not persuasive.

In particular, the Examiner appeared to argue in the Advisory Action that there is a difference between a claim limitation of "at a node" and claim limitation of "in a node." The Examiner accurately argued that the Applicant's "[c]laim limitation does not state 'in a node' ..., rather, claim limitations state "at a node'."

The Examiner went on to argue that "provisioning" and "restoring" of circuits "has to happen within a node." Frankly, the Applicant does not fully understand the Examiner's argument. The Applicant does not even know whether the Examiner believes that a claim limitation of "within a node" is the same as a claim limitation of "in a node" or a claim limitation of "at a node." Presumably, "within" is closer to "in" than "at."

Assuming, for the sake of the Examiner's argument, that there is a difference between "at a node" and "in a node" (which the Applicant does not necessarily admit) and assuming that the Examiner believes that "within a node" is the same as "in a node," the fact is that the Examiner's own argument concluded that "Arslan's maximum number of cross-connections in a circuit is happening within a node." But claim 1 recites "a maximum number of failure-related cross-connections at a node in the network." So the Examiner's own argument indicates that there is a difference between Arslan and the present invention.

The truth is that the differences between Arslan and the present invention have nothing to do with any alleged differences between the meanings of "at a node" and "in a node" or even "within a node." As described previously, a significant difference between Arslan and the present invention is based on the fact that Arslan's term "circuit" means "path," not "node."

Specifying a maximum number of cross-connections in Arslan's circuits (i.e., paths) means that each path in Arslan's network has a maximum number of intermediate nodes (where each intermediate node provides a cross-connection for the path).

Significantly, there is no limit in Arslan to the number of paths in Arslan's network. As such, in theory, there is no limit in Arslan to the number of cross-connections at (or in or within) any given node in Arslan. According to the present invention, however, there is a specified maximum number of cross-connections at a node in the network. And this is a feature that Arslan simply does not teach or even suggest.

In view of the foregoing, the Applicant submits that claim 1 is allowable over the cited references. For similar reasons, the Applicant submits that claim 15 is allowable over the cited references. Since claims 3-14 and 17-28 depend directly or indirectly from claims 1 and 15, it is further submitted that those claims are also allowable over the cited references.

For the reason set forth above, the Applicant submits that the rejections of claims under Sections 103(a) have been overcome.

In view of the above remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

Date: 10/03/2008
Customer No. 46850
Mendelsohn & Associates, P.C.
1500 John F. Kennedy Blvd., Suite 405
Philadelphia, Pennsylvania 19102

/Steve Mendelsohn/
Steve Mendelsohn
Registration No. 35,951
Attorney for Applicant
(215) 557-6657 (phone)
(215) 557-8477 (fax)